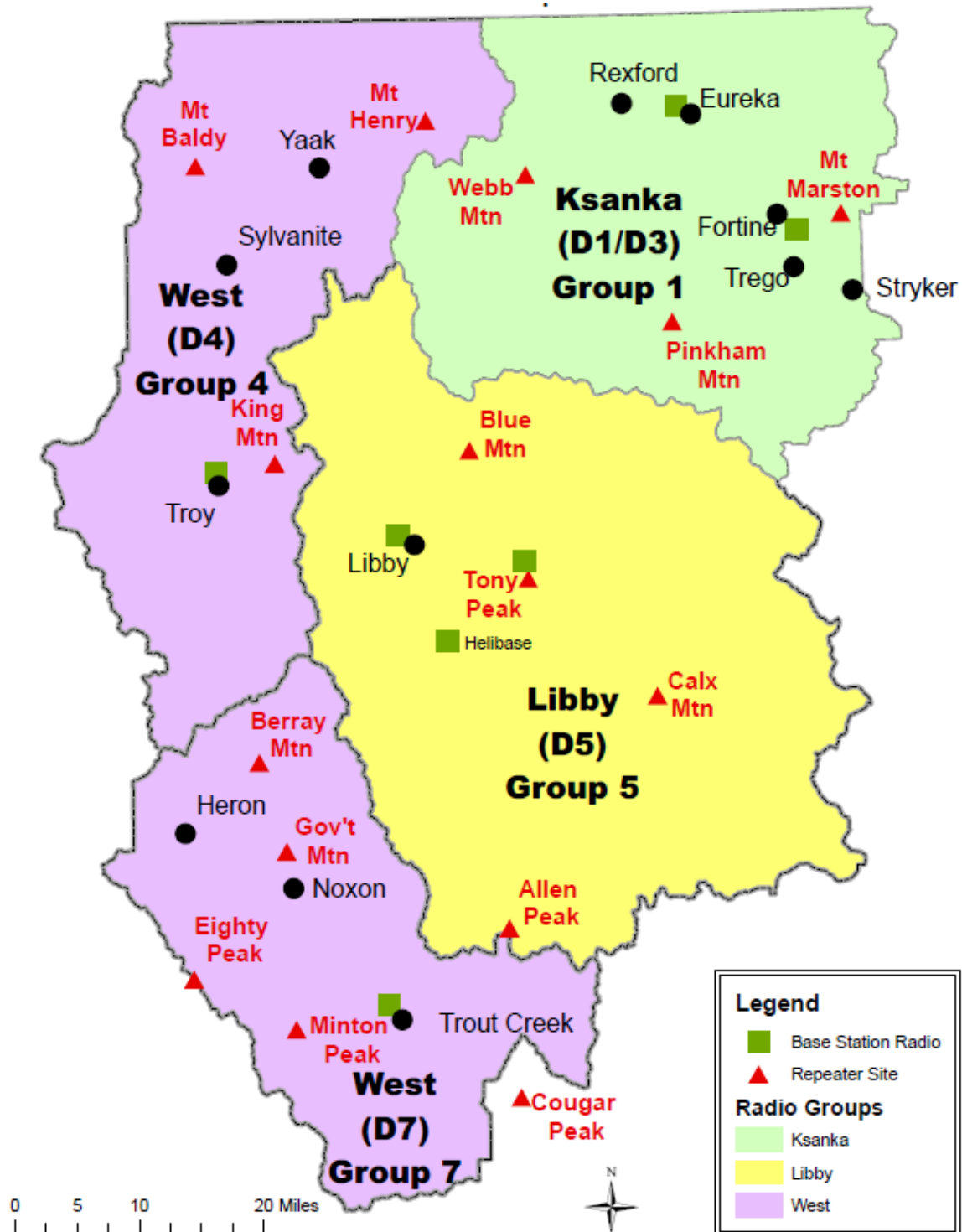


Kootenai National Forest 2018 Radio User Guide



Introduction

This guide is designed to assist radio users in operating the Kootenai National Forest's (KNF) radio system. The system utilizes Kenwood and Bendix/King Mobile radios, and Bendix/King and KNG hand-held radios that have been programmed to the KNF's frequencies. Users will be required to attend annual training to obtain an understanding of how the KNF's radio system works and how to properly use a radio to communicate. Radio users should read this guide and use it in the field as a reference.

Forest Radio System:

Within the KNF there are three radio frequency zones comprised of a series of base stations and mountaintop repeaters. The radio zones are Ksanka, Libby, and West. Radio base stations are located at all District Offices, the Supervisor's Office, Kootenai Interagency Dispatch Center (KDC), Libby Helibase, and on Blue Mountain. They are used for direct communications to the field or to access mountaintop repeaters for additional coverage.

Kootenai Interagency Dispatch Center is broken into two dispatch zones. They are the East Zone and the West Zone.

The East Zone is comprised of two districts, (Libby Ranger District and Ksanka Ranger District) and the Montana DNRC Libby Unit. The East Zone is broken into two separate radio networks. The Libby network operates under the 172.2500 MHz frequency on all repeaters. The Ksanka network operates under a 171.2625 MHz frequency.

The West Zone is comprised of two districts; Three Rivers Ranger District and Cabinet Ranger District. The West Zone network operates under the 171.3875 MHz frequency on all repeaters.

Base station locations are as follows:

Base Stations

- Blue Mountain for the Kootenai Interagency Dispatch Center (KDC)
- Libby Helibase located at Libby Airport
- Eureka Ranger Station
- Canoe Gulch Ranger Station
- Libby Fire Cache
- Troy Ranger Station
- Cabinet Ranger Station

Base Station Call Signs

Kootenai Dispatch
Libby Helibase
Rexford
Canoe Gulch / Libby District
Libby Fire Cache
Three Rivers / D4
Cabinet

Base stations, mobile and handheld radios are programmed with the same channel plan. (see KNF Channel Plan). All radios (handhelds, mobiles, desk remotes and consoles) have an alpha/numeric display which shows the channel name.

Repeaters

Each of the following mountaintops have a repeater. The name next to the repeater represents which dispatch zone that repeater is associated with.

- Webb Mountain (East)
- Pinkham Mountain (East)
- Mount Marston (East)
- King Mountain (West)
- Mount Baldy (West)
- Mount Henry (West)
- Blue Mountain (East/West)
- Calx Mountain (East/West)
- Tony Peak (East)
- Allen Peak (East/West)
- Cougar Peak (West)
- Berray Mountain (West)
- Government Mountain (West)
- 80 Peak (West)
- Minton Peak (West)

It is important to be aware of repeater locations so that the closest and most accessible site can be selected, even though the repeater may not be located on your district. Radios have limited range so their signals can easily be blocked by mountains. Therefore, a repeater may allow you to communicate in places where you would not be able to without using it.

Work and Tac Channels

Each district will have one work channel and at least two tac channels. Each channel will still have a unique tone for each district. See the KNF Channel Plan to reference the RX/TX frequency and Tone for each of these channels. These channels are designed for day to day field and fire work.

Radio Traffic Priorities:

At all times, the following priorities are in effect:

1. **LIFE AND DEATH**
2. **AIRCRAFT**
3. **NEW FIRE REPORTS**
4. **ON-GOING FIRES**
5. **WEATHER REPORTS**
6. **ADMINISTRATIVE**

Radio Protocol:

- The 171.3875 MHz frequency is used by the forest's West Zone as a Command frequency. All West Zone administrative traffic will use this frequency. In general, Troy and Cabinet Districts (administrative and fire) should be using these channels.
- The 171.2625 MHz frequency is utilized on the Ksanka radio network. It is used by the northern half of the forest's East Zone as a Command frequency. In general, all Ksanka District traffic (administrative and fire) should be using these channels.
- The 172.2500 MHz frequency is utilized on the Libby radio network. It is used on the southern half of the forest's East Zone as a Command frequency. In general, Libby District traffic (administrative and fire) should be using these channels.
- The 168.7750 frequency is the "Work" channel and is separated by District (ex. D7 WORK). The work channel is set to Channel 3 on all groups. All Work channels have a tone that is specific to each district.
- The 171.4750 frequency is the "Tac 1" channel and is separated by District (ex. D7 TAC 1). Tac 1 is set to Channel 4 on all groups. All Tac channels have a tone that is specific to each district.
- The 167.1125 frequency is the secondary "Tac 2" channel. and is separated by District (ex. D4 TAC 2). Tac 2 is set to Channel 12 on all groups. All secondary Tac channels have a tone that is specific to each district. **NOTE: D7 has been given an additional secondary tac frequency due to interference. It is 170.5000**
- The "Red" channel is a statewide fire mutual aid frequency for communication between federal, state, and local agencies. The Red Channel is on CH 14 for each group.
- Air to ground (AIR/GND) is the frequency used for communication between ground and aircraft resources, each zone will have a unique AIR/GND frequency assigned. A/G is set on Channel 11 for each group.
- Below is a list of the 911 dispatch centers and the Forest Service offices that correlate with them.

911 Call Sign

Sheriff Dispatch
Eureka Dispatch
Troy Dispatch
Sanders County

Base Station Call Names

Canoe Gulch / Libby Fire Cache
Rexford (Ksanka)
Three Rivers / D4
Cabinet

Administrative Traffic:

All Districts are required to handle their own administrative traffic using their district check in/check out procedures. Kootenai Dispatch can be used as a backup when someone is unable to reach their home unit. In the case of an emergency, please reference the section below labeled Radio Emergency Use Procedures.

Due to regulations and licensing restrictions, only the Forest Supervisor has legal authority to program radios. However, this function has been delegated to the ISO department (Todd Orr/Eric Proctor/Neal Maben). In addition, one employee at each district has been designated to program radios and serve as a contact for radio questions, trouble shooting, and coordination, as follows:

- D1/3 Cody White (RJ McDole – backup)
- D4 Tyler Bothman (JR Rebo/Beau Macy – backup)
- D5 Brent Cooper (Grant Rider – backup)
- D7 Brian Krick (Adam Carr – backup)
- SO Vacant

Note: All frequencies and tones are programmed into your radio. A user should not need to manually program them. If you have any radio concerns you should contact the appropriate person at your location or the CIO contact at the SO, which is **Todd Orr** at (406) 283-7702

Flight Following:

Radio communication on KNF frequencies for flight following between aircraft and Kootenai Dispatch can be done on either Kootenai East or West. In general though, for sustained operations, whichever zone the aircraft is flying over will determine the frequency being used to flight follow.

Flight following with DNRC aircraft will usually be done on the State frequency (151.2650).

After Hours Radio Protocol:

Each District located in Lincoln County has an agreement with the local Sheriff's Office to monitor our radio frequency. The Libby Sheriff's office monitors Blue Libby, Troy Sheriff's office monitors King, and Eureka Dispatch monitors Pinkham. If individuals are going to be out after-hours, the Kootenai Dispatch will notify the Sheriff's Office. The individuals would then be responsible to check in with the Sheriff's Office with any change in plans, or, when they have returned to the District Office. If the Sheriff's Office does not receive a check-in, they would contact the Kootenai Dispatch Duty phone.

After Action Reviews:

With the newness of the three radio zone concept and reorganization of Kootenai Dispatch, communications should be a major component of all AAR's. Any and all problems with communications should be discussed and documented during every AAR.

NOTE: Some fire crews will be utilizing new digital Bendix/King handheld radios. They will be programmed with the same Channel plans and used in the analog mode to transmit and mixed mode to receive. Refer to the user manual for details regarding components and functions.

Radio Emergency Use Procedures:

- **Turn the radio on and turn up the volume.**
- **Check to make sure you are using the proper group.** To select a group, press the # key (this will show the current group) then press the number of the desired group and wait for 5 seconds, or press enter.
- **Select a channel.** Refer to a map and the Kootenai Channel Plan to determine what channel to use. Use the Channel Selector Knob, on the Bendix Kings, or the orange group select button on the top of the KNG radios, to select the channel. There are 16 channels on your radio.
- **Transmit your message.** If you are in an emergency situation, begin your transmission by stating that you have an emergency. For example, "Kootenai Dispatch, this is Jane Smith, I have an emergency." Broadcasting that you have an emergency lets other listeners know that you have priority and that everyone else should stay off the radio until you are done. Press and hold the Push-to-talk button. Hold the button in throughout the entire message. If your message is too long, the transmit signal will time out and cut you off. Therefore, if you have a long message, you may have to pause and release the PTT button and then press in again to continue.

NOTE: Even if you do not receive a response, transmit your entire message. Someone may be able to hear you, but you may not hear them.

- ✓ **Medical Emergency:** If you are dealing with an injured person and are requesting medical help, do not give the name of the injured person over the radio. Reference the KNF Medical Evacuation Plan's medical incident size up card for information to be relayed over the radio. If you don't have one, when you contact Kootenai Dispatch, they will prompt you for the information needed.

Radio Etiquette

- **Use plain text at all times.** Plain text means speak in complete English. Do not use codes or abbreviations.
- **Speak slowly and hold the radio an inch or so away from your lips.** If you hold the microphone too close to your lips, your transmission might sound fuzzy and garbled.
- Do not begin a transmission until you are sure there are no other conversations taking place.
- **To initiate a call, state the name of the person or location you are calling followed by your name.** For example, "Kootenai Dispatch; Jane Smith" or "Kootenai Dispatch, this is Jane Smith."
- **Use the channel label instead of the channel number** to tell the other party what frequency/repeater you are on. For example, "Kootenai Dispatch, this is Jane Smith on 80 Peak" or "Kootenai Dispatch, this is Jane Smith on Blue Libby". Make sure that the answering party is completely finished talking before you respond. Wait until you hear the squelch tail (the hiss) at the end of the transmission.
- When finished with communications be sure to sign off with your name, or location and "clear". For example, "Smith clear" or "Helibase clear".

Trouble Shooting for Radios:

1) Check the battery: Hold in the PTT Button and look at the Low Battery Indicator on top of your radio. If the light blinks on and off, or blinks just once and goes out, your battery is probably bad. The light should stay on the entire time you have the PTT Button pressed.

2) Check your position: Make sure you are standing still and holding the radio up right (perpendicular to the ground). This is important because moving the radio around or holding it at different angles will affect the antennae's power and ability to transmit or receive a message.

3) Check the repeater: Even though it looks like the repeater you have chosen is the closest, you may not have a direct line of site to the repeater. For instance, there could be a high mountain peak between you and the repeater. You may need to select a different repeater or move to a higher location.

4) Check the group and channel.

5) Is your radio scanning? If so, traffic on another channels that are being scanned may be blocking the transmission of the person you want to receive.

6) If it appears that your radio will not turn on, it could be because it is on a channel that is unprogrammed. It has been discovered that King radios will not turn on if the channel selector is set to an unprogrammed channel. Turn off the radio, change the channel and try again.

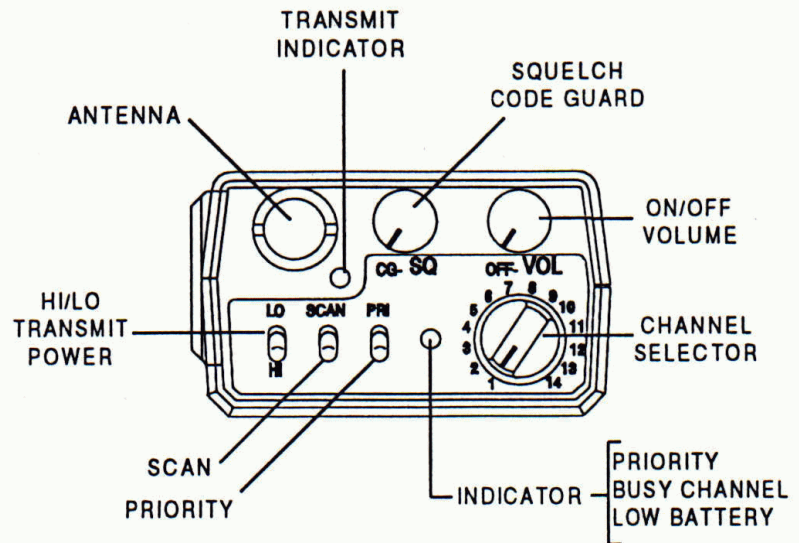
7) Check the Code Guard/Squelch setting if using a handheld radio. Make sure it is turned counter-clockwise all the way until it clicks. This activates the receive code guard function of your radio; channels that have receive tones will only receive transmissions on that frequency that contain the appropriate tone.

Components and functions of a Bendix/King Handheld Radio:

On-Off/Volume: Turn the On-Off/Volume Knob clockwise to power the radio. Continue turning the knob clockwise to increase the volume.

Squelch/CG: Turn the squelch knob counter-clockwise until it stops. This is the CG (Code Guard) position, and is where this knob should be set for your radio to functions as described in this guide.

Channel Selector: Turn the Channel Selector Knob to the desired channel (*see the attached Kootenai National Forest Channel Plan*).



Groups: Multiple groups is a feature of the radio that increases the number of programmable channels. There are 15 groups available and a maximum of 16 channels in each group which allows for a total of 240 channels.

To select a group perform the following steps:

- 1) Press the pound (#) key on the key board to display the current group on the LCD display.
- 2) Press the appropriate number for the desired group.
- 3) Press **ENT** for your selection to be accepted.

Groups 12-15 should be used when programming non-Kootenai and temporary frequencies. For instance, if on assignment in another region, a communications technician should program any necessary frequencies into groups 12-15.

It is important to check that the proper group is selected. **Press the pound (#) key at any time to view the current group selected.**

Channel Busy/Low Battery Indicator: This indicator will illuminate red when transmitting a message over the radio and when receiving a signal on the priority channel. The light should illuminate solid red when transmitting. If the light blinks once or twice and then goes out or if the light flickers, it means the battery could be low.

Switch A - Hi/Lo Transmit Power: This switch allows you to either use full transmit power (HI) or reduced transmit power (LO). Using LO power conserves energy and helps preserve the battery. LO power should be used when monitoring the radio in town or in close proximity of a base station. **The radio is in HI power when the switch is pushed towards you and in LO power when the switch is pushed away from you.**

Switch B - Scan: Bendix/King radios allow users to monitor frequencies from a preset scan list, including the currently selected channel. When a signal is detected, scanning stops and the message is received. The received channel label is shown on the LCD. Once the signal ends, the radio continues to monitor the channel for a preset amount of time before it resumes scanning. If you wish to respond to a message received on a scanned channel, you will have to change the currently selected channel. All transmissions in scan mode will occur on the channel selected (see Channel Selector Knob). **The radio is in scan mode when the switch is pushed away from you. To turn off the scan function, push the switch towards you.**

To determine what channels are being scanned, turn the scan switch off and turn the Channel Selector Knob to each channel. If the channel is on the scan list, "SCN" will appear on the top portion of the LCD. To add a channel to the scan list, select the channel with the Channel Selector Knob and then press ENT. To remove a channel from the scan list, press the CLR key. After a short beep, "SCN" should disappear. **SCN solid indicates that channel is included in the scan list; SCN flashing indicates that the scanning function has been activated and all channels in the scan list are being scanned.** When adding or deleting a channel from the scan list, both the Scan and Priority Switches should be turned off (pushed down toward the user). Only channels in the current group can be scanned.

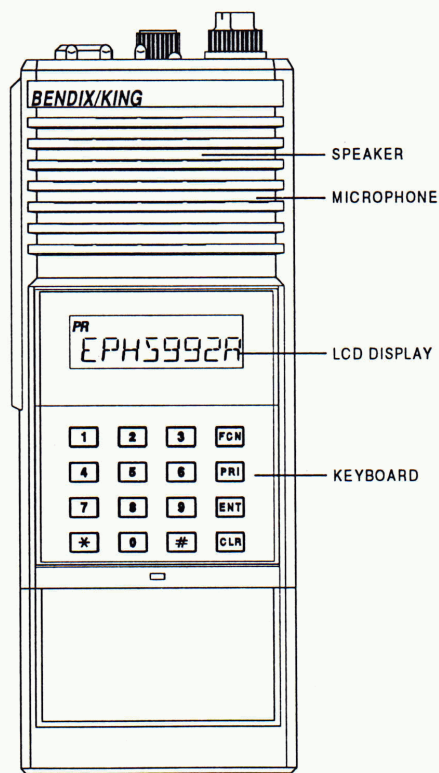
Switch C - Priority: Priority scan allows a radio to monitor traffic on a priority channel. This function can operate with or without the scan function. The radio checks the priority channel every few seconds. When in priority mode, the transmissions on the priority channel will override all other transmissions, even though the priority channel may not be the currently selected channel. **PR in the upper left corner of the display screen indicates that channel is set as the priority channel. SCN flashing indicates that the priority function has been activated (see Switch B above also) and the priority channel is being scanned and will override transmissions on other frequencies.** When a transmission on the priority channel is received, the channel label will appear on the display screen along with "RX" above it.

To set a priority channel, perform the following steps:

1. Turn off the Priority and Scan Switches (they should be pushed down towards you).
2. Move the Channel Selector Knob to the channel you want to set as the priority.
3. Press the PRI key on the key board.
4. Turn on the Priority Switch to activate priority mode.

Antenna: The size of the antenna affects the range capabilities of radio signals. For instance, longer antennas can transmit and receive signals from repeaters and base stations that are further away than radios with shorter antennas. To ensure that clear signals are being sent and received, stand still while communicating and hold the radio straight up and down so that it is perpendicular with the ground. If you are talking to aircraft, you should hold the radio in a horizontal position. It is important to take good care of antennas, as bent or broken antennas will not transmit or receive signals.

Push-To-Talk Button (PTT): Pressing this button activates the transmit mode (talk mode). Press in and hold this button throughout the entire transmission. For a complete message to be heard, press the button and wait for a second or two before beginning the message and continue to hold in the button for a few seconds after completing the message. This allows time for the signal to access or "key up" the repeaters if necessary.



Speaker: Radio signals are picked up and transmitted over the speaker. The On-Off/Vol switch allows users to adjust the volume of their radio.

LCD Display: The LCD display shows a variety of information. The upper right hand corner displays codes to let users know if the radio is set in priority mode (PR), and/or scan mode (SCAN). The main part of the display will show which channel is selected for transmitting and receiving messages. In addition, by pushing the pound (#) key, the current group selected will be displayed in the main part of the box.

Key Board: The key board provides a mechanism that allows users to change groups and set scan lists. To remove the cover, remove the battery pack and then slide the cover down. Remember to replace the battery pack after removing the cover.

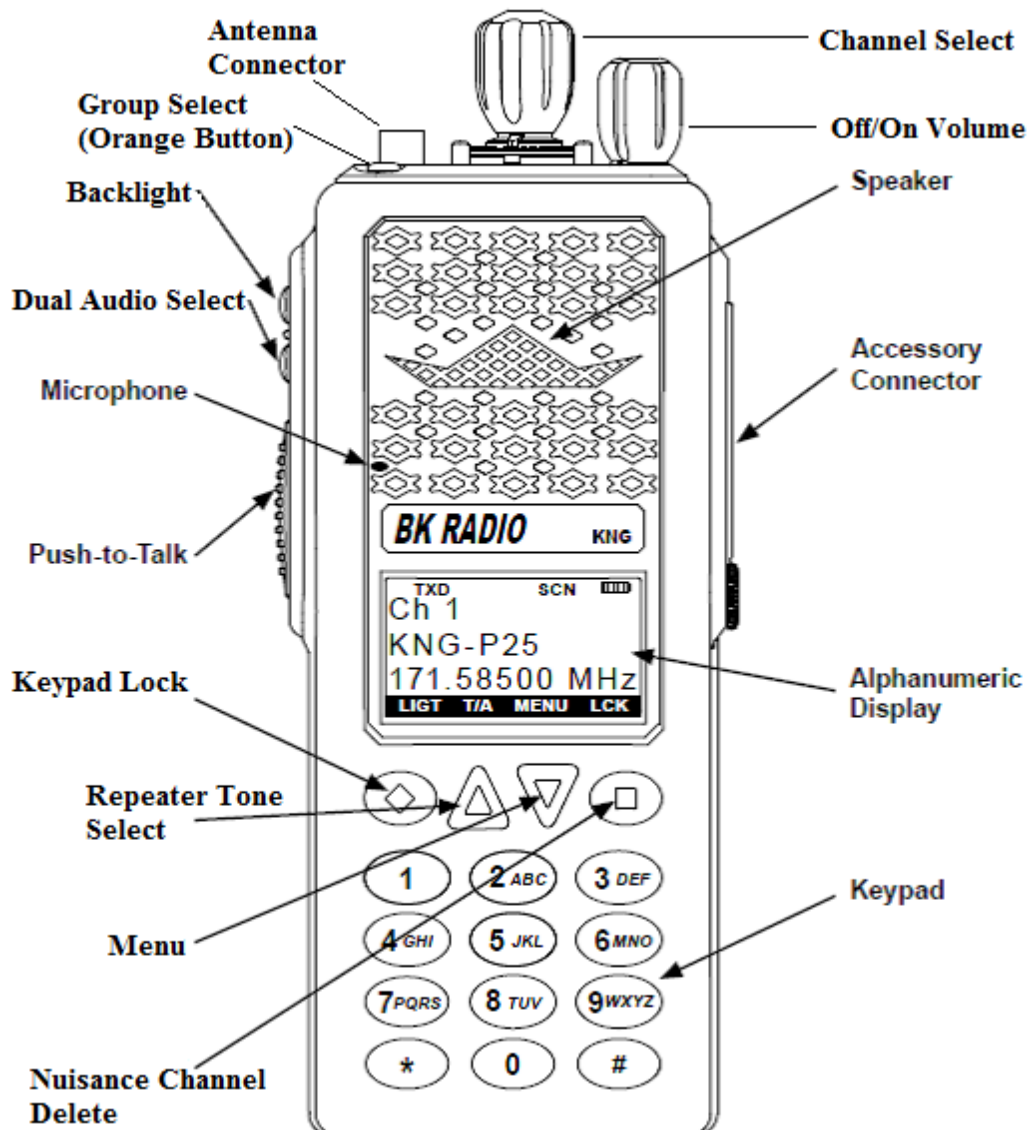
Battery: As mentioned above, the Channel Busy Indicator will alert users to a low battery. To remove the battery, push up on the metal tab on the side of the case while twisting the battery pack approximately 30 degrees and separating it from the radio. Bendix/Kings have either a rechargeable battery pack or a clam shell which contains 9 AA batteries. If your clam shell is not Orange please contact the Radio manager at the district or call the SO.

KNG HANDHELD RADIO FEATURES

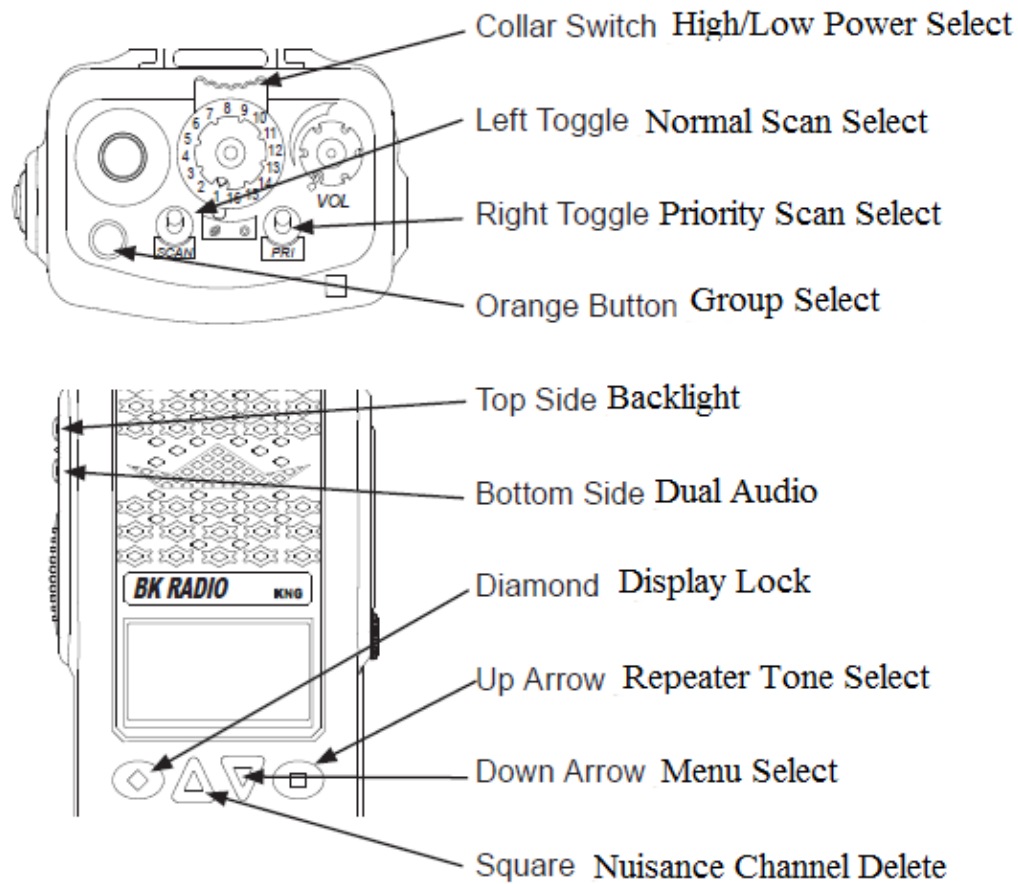
The KNG radio is the replacement for the BK Radio GPH and DPH portable radio models. Much of its operation is similar to the older radios, but it also has some enhancements. Refer to the following diagrams for control locations.

FRONT VIEW

The middle of the KNG display has three lines of text. The top line displays the Zone (Group) name. The second line displays the channels name, and the third line is the transmit code guard (aka repeater tone number or User Code Guard) in use.



Your Radio Settings



The button functions are programmable and will vary from forest to forest.

MENU SELECTIONS

Pressing the Down Arrow button will invoke the radio's menu. The following are choices that can be selected from this menu.

- Squelch Set (Manual or Automatic)
- Scan List
- Cloning (refer to the KNG programming manual for instructions if needed)
- Zone Scan List
- Zone Scan (Enable or Disable)
- Monitor (Bypasses any receiver tone protection if used)
- Mixed Mode Transmit (Used only when operating in digital mode)
- User Transmit NACs (Used only in digital operation)
- Keypad Programming
- Version (Displays firmware version)
- Contrast (Adjust the display contrast)
- Radio Status

Components and functions of Bendix/King Base Station and Mobile Radios:

Using a Bendix/King base station or mobile radio is similar to using a Bendix/King handheld radio. The functions that are controlled by the 5 buttons located below the display screen are active if a triangle is present in the screen above the button. Functions of the buttons are as follows:

MON The monitor button will cause the radio to produce a constant noise when activated. This may be useful to find a comfortable volume level.

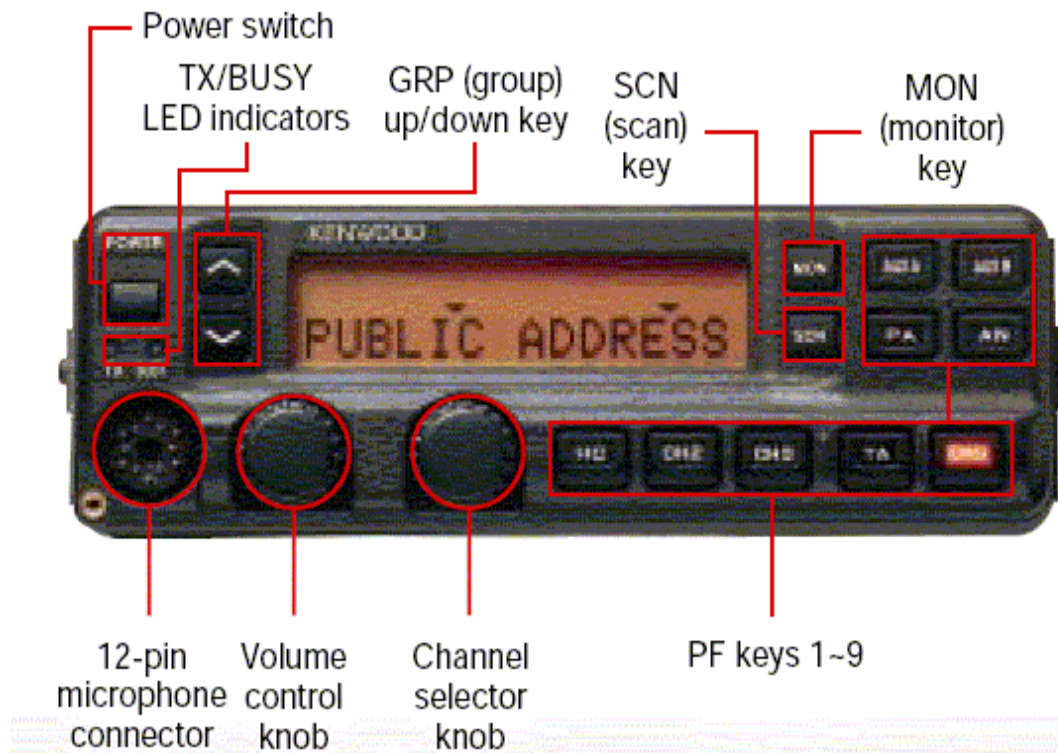
SCN The scan button provides the same function as the scan toggle on a handheld radio. Channels are entered or deleted from the scan bank as described above for handheld radios.

PRI The priority button provides the same function as the priority toggle on a handheld radio. The priority channel is entered using the same method as described above for handheld radios.

GRP The group button is used to change groups. This is done by pushing the group button and turning the channel knob to the desired group.

SQL This button is used to adjust the squelch. This adjustment should be unnecessary. If you feel the squelch needs adjusted on your radio, contact your District Radio Coordinator.

Components and functions of Kenwood TK-790 Mobile Radios:



Functions of the buttons are as follows:

Group Selection The up/down arrows used to change groups. The group selected is indicated by the number in the left side of the display screen.

SCN The scan button activates the scan function of those channels that have been entered into the scan bank as described below for the D/A button. The scanning function is activated when the display screen reads "SCAN".

D/A This button is used to delete or add channels into the scan bank for that group. A downward pointing arrow on the right side of the display screen indicates a channel is included in the scan list.

DIM This button is used to adjust the brightness of the display screen.

Components and functions of Vega C-2002 Base Station Remote Consoles:

Vega C-2002 remote consoles are linked to a nearby Bendix/King base station (GBH model) and used to transmit/receive via the base station from an alternate location.

Volume – Adjust using the up/down arrows.

Transmit – To transmit, push the red transmit button on the console or pick up the handset and depress the button on the handle.

Channels - Push SEL F1-F8 for channels 1-8; push SEL ALT F1-F8 for channels 9-16.

Groups – Groups cannot be changed at the console.

Radio User Glossary

Analog Radio: A radio which encodes the audio in a smooth, continuous fashion for transmission.

APCO Project 25 (P25): An industry standard for digital radio equipment.

Band: Sometimes called a frequency band - is a specific range of frequencies in the radio frequency spectrum, which is divided among ranges. Two commonly used bands are ultra high frequencies (UHF) and very high frequencies (VHF). Each band has a defined upper and lower frequency limit (see below).

Bandwidth: Bandwidth can have several meanings, for this manual bandwidth refers to the amount of radio spectrum that is assigned to a radio channel (see Wideband and Narrowband).

Base Station: A stationary radio (generally in offices) that generally produces 30-50 watts.

Code Guard: A copyrighted Bendix/King term for tone.

Command: A label used for a frequency whose function is for administrative/management purposes.

Digital Radio: A radio which digitizes the audio before transmission.

Forest Dispatching: The situation when all resources are dispatched by KDC and all administrative traffic will be using their designated Zone Frequencies

Handheld Radio: A small convenient radio (generally carried on person) that produces 2-5 watts.

KDC: Kootenai Interagency Dispatch Center, located in the KNF Supervisor's Office, Libby, MT.

Mobile Radio: A radio mounted in a vehicle that produces 30-50 watts.

Narrowband: A radio channel that is assigned 12.5 KHz of spectrum.

Net: Refers to a radio network. A radio network is a group of base stations and repeaters that are capable of operating together.

Priority: A feature available on radio transceivers that prioritizes a channel during scanning operation. It will allow the priority channel to be heard if simultaneous transmissions are being received.

Radio Protocols: Proper edict and procedures for radio use.

Remote/Console/Tone Remote/Base Station Remote Console: A device used to remotely operate a base station radio. Often these devices look similar to telephones.

Repeater: A radio which receives a radio signal on one frequency and retransmits on another. Often used to extend the range of a radio system.

Scanning: A feature available on radio transceivers that allows a user to monitor multiple radio channels at the same time.

Simplex/Direct: A radio channel in which the transmit and receive frequency are the same.

Single tone/Toned on one side: A radio channel that has a programmed tone on either the transmit or receive frequency.

Tactical/Work: A frequency whose function is for communication to complete assignments, other than administrative/command purposes.

Tone: A sub-audible signal that is used with a transmit or receive frequency.

Toned both sides: A radio channel that has both a transmit and receive tone.

UHF: Ultra High Frequency. Radio frequencies from 300 MHz to 3000 MHz

VHF: Very High Frequency. Radio frequencies from 30 MHz to 300 MHz

Wideband: A radio channel that is assigned 25 KHz of spectrum.

Group 1 North End (Ksanka) D1 / D3

CH #	Channel Name	RX Freq	RX CG	TX Freq	TX CG	Narrow Band	COMMENTS
1	KSANKA	171.2625	0.0	171.2625	123.0	Y	North East Zone
2	NE WORK	168.7750	103.5	168.7750	103.5	Y	NE District Work Channel
3	NE TAC 1	171.4750	103.5	171.4750	103.5	Y	NE Tac Channel
4	NE TAC 2	167.1125	103.5	167.1125	103.5	Y	NE Tac Channel
5	NE TAC 3	171.4750	114.8	171.4750	114.8	Y	NE Tac Channel
6	NE TAC 4	167.1125	114.8	167.1125	114.8	Y	NE Tac Channel
7	PINKHAM	171.2625	0.0	163.3500	107.2	Y	North East Zone
8	WEBB	171.2625	0.0	163.3500	103.5	Y	North East Zone
9	CALX	172.2500	0.0	164.1250	146.2	Y	South East Zone
10	MARSTON	171.2625	0.0	163.3500	114.8	Y	North East Zone
11	A/G 52 E	168.3875	0.0	168.3875	110.9	Y	East Zone A/G
12	BLUEKAS	171.2625	0.0	163.3500	167.9	Y	North East Zone
13	EUR VFD	154.2050	0.0	154.2050	0.0	Y	Eureka Volunteer Fire Department
14	RED	154.0700	0.0	154.0700	156.7	Y	Statewide Mutual Aid
15	LOGGER	151.9250	0.0	151.9250	0.0		Local Logger Channel
16	TAN	155.3400	0.0	155.3400	156.7	Y	Air Ambulance A/G

Group 2 State / DNRC

CH #	Channel Name	RX Freq	RX CG	TX Freq	TX CG	Narrow Band	COMMENTS
1	CALX	172.2500	0	164.1250	146.2	Y	South East Zone
2	ALLENLIB	172.2500	0	164.1250	151.4	Y	South East Zone
3	COUGAR	171.3875	0	165.4625	141.3	Y	West Zone
4	MARSTON	171.2625	0	163.3500	114.8	Y	North East Zone
5	DNRC CAL	151.2650	0	159.4050	114.8	Y	DNRC LU Repeater Calx Mtn
6	DNRC LU	151.2650	0	151.2650	114.8	Y	DNRC Libby Unit Direct
7	STILLWTR	151.2500	0	151.2500	0.0	Y	DNRC Stillwater Unit/Olney
8	DNRC KU	151.1750	0	151.1750	192.8	Y	DNRC Kalispell Unit Direct
9	PATSKNOB	151.1900	0	159.3600	141.3	Y	DNRC Plains Unit Repeater
10	RICHARDPK	151.1900	0	159.3600	114.8	Y	DNRC Plains Unit Repeater
11	DNRC PU	151.1900	0	151.1900	0.0	Y	DNRC Plains Unit Direct
12	YELLOW	151.2200	0	151.2200	156.7	Y	DNRC Air to ground
13	ORANGE	151.4000	0	151.4000	156.7	Y	DNRC Secondary Air to Ground
14	RED	154.0700	0	154.0700	156.7	Y	Statewide Mutual Aid
15	MIDCGRN	171.4750	0	171.4750	141.3	Y	DNRC Missoula Unit Direct
16	TAN	155.3400	0	155.3400	156.7	Y	Air Ambulance A/G

Group 3 Air Ops East Zone

CH #	Channel Name	RX Freq	RX CG	TX Freq	TX CG	Narrow Band	COMMENTS
1	LIBBY	172.2500	0.0	172.2500	123.0	Y	South East Zone
2	KSANKA	171.2625	0.0	171.2625	123.0	Y	North East Zone
3	DECK	163.7125	0.0	163.7125	110.9	Y	Deck
4	BLULIBBY	172.2500	0.0	164.1250	167.9	Y	South East Zone
5	BLUKSAN	171.2625	0.0	163.3500	167.9	Y	North East Zone
6	CALX	172.2500	0.0	164.1250	146.2	Y	South East Zone
7	ALLENLIB	172.2500	0.0	164.1250	151.4	Y	South East Zone
8	WEBB	171.2625	0.0	163.3500	103.5	Y	North East Zone
9	PINKHAM	171.2625	0.0	163.3500	107.2	Y	North East Zone
10	MARSTON	171.2625	0.0	163.3500	114.8	Y	North East Zone
11	A/G 52 E	168.3875	0.0	168.3875	110.9	Y	East Zone A/G
12	A/G 29 W	166.9000	0.0	166.9000	110.9	Y	West Zone A/G
13	FNF DIRCT	173.1125	0.0	173.1125	123.0	Y	Flathead NF (IA/FF) DIRECT
14	FNF ASH	173.1125	0.0	164.3750	131.8	Y	FNF ASHLEY RPTR
15	FNF WERN	173.1125	0.0	164.3750	136.5	Y	FNF WERNER RPTR
16	AIR GUAR	168.6250	0.0	168.6250	110.9	Y	Air Guard - Federal Air Monitor Channel

Group 4 Three Rivers RD / D4

CH #	Channel Name	RX Freq	RX CG	TX Freq	TX CG	Narrow Band	COMMENTS
1	WEST	171.3875	0.0	171.3875	110.9	Y	West Zone
2	D4 WORK	168.7750	136.5	168.7750	136.5	Y	D4 District Work Channel
3	D4 TAC 1	171.4750	136.5	171.4750	136.5	Y	D4 Tac Channel
4	D4 TAC 2	167.1125	136.5	167.1125	136.5	Y	D4 Tac Channel
5	BALDY	171.3875	0.0	165.4625	136.5	Y	West Zone
6	HENRY	171.3875	0.0	165.4625	156.7	Y	West Zone
7	BERRAY	171.3875	0.0	165.4625	162.2	Y	West Zone
8	BLULIBBY	172.2500	0.0	164.1250	167.9	Y	South East Zone
9	WEBB	171.2625	0.0	163.3500	103.5	Y	North East Zone
10	GOVERNME	171.3875	0.0	165.4625	131.8	Y	West Zone
11	A/G 29 W	166.9000	0.0	166.9000	110.9	Y	West Zone A/G
12	KING	171.3875	0.0	165.4625	110.9	Y	West Zone
13	LOC GOV	154.0400	156.7	154.0400	156.7	Y	Local Government Direct
14	RED	154.0700	0.0	154.0700	156.7	Y	Statewide Mutual Aid
15	LOGGER	151.9250	0.0	151.9250	0.0		Local Logger Channel
16	TAN	155.3400	0.0	155.3400	156.7	Y	Air Ambulance A/G

Group 5 Libby RD / D5

CH #	Channel Name	RX Freq	RX CG	TX Freq	TX CG	Narrow Band	COMMENTS
1	LIBBY	172.2500	0.0	172.2500	123.0	Y	South East Zone
2	D5 WORK	168.7750	146.2	168.7750	146.2	Y	D5 District Work Channel
3	D5 TAC 1	171.4750	146.2	171.4750	146.2	Y	D5 Tac Channel
4	D5 TAC 2	167.1125	146.2	167.1125	146.2	Y	D5 Tac Channel
5	BLU LIB	172.2500	0.0	164.1250	167.9	Y	South East Zone
6	MLA	151.5050	0.0	151.5050	94.8	Y	Montana Logger Association
7	TONY	172.2500	0.0	164.1250	123.0	Y	South East Zone
8	CALX	172.2500	0.0	164.1250	146.2	Y	South East Zone
9	ALLEN W	171.3875	0.0	165.4625	151.4	Y	West Zone
10	PINKHAM	171.2625	0.0	163.3500	107.2	Y	North East Zone
11	A/G 52 E	168.3875	0.0	168.3875	110.9	Y	East Zone A/G
12	CO FIRE	154.2050	0.0	154.2050	0.0	Y	D5 Secondary Tac Channel (Regional)
13	RED	154.0700	0.0	154.0700	156.7	Y	Statewide Mutual Aid
14	ALLN LIB	172.2500	0.0	164.1250	151.4	Y	West Zone
15	LOGGER	151.9250	0.0	151.9250	0.0		Local Logger Channel
16	TAN	155.3400	0.0	155.3400	156.7	Y	Air Ambulance A/G

Group 6 Air Ops West Zone

CH #	Channel Name	RX Freq	RX CG	TX Freq	TX CG	Narrow Band	COMMENTS
1	WEST	171.3875	0.0	171.3875	110.9	Y	West Zone
2	BALDY	171.3875	0.0	165.4625	136.5	Y	West Zone
3	DECK	163.7125	0.0	163.7125	110.9	Y	Deck
4	KING	171.3875	0.0	165.4625	110.9	Y	West Zone
5	HENRY	171.3875	0.0	165.4625	156.7	Y	West Zone
6	GOVERNME	171.3875	0.0	165.4625	131.8	Y	West Zone
7	80 PEAK	171.3875	0.0	165.4625	100.0	Y	West Zone
8	ALLENWE	171.3875	0.0	165.4625	151.4	Y	West Zone
9	COUGAR	171.3875	0.0	165.4625	141.3	Y	West Zone
10	MINTON	171.3875	0.0	165.4625	127.3	Y	West Zone
11	BERRAY	171.3875	0.0	165.4625	162.2	Y	West Zone
12	A/G 29 W	166.9000	0.0	166.9000	110.9	Y	West Zone A/G
13	A/G 52 E	168.3875	0.0	168.3875	110.9	Y	East Zone A/G
14	DNRCCALX	151.2650	0.0	159.4050	114.8	Y	DNRC LU Calx Repeater
15	YELLOW	151.2200	0.0	151.2200	156.7	Y	Air to ground DNRC (Yellow)
16	AIR GUAR	168.6250	0.0	168.6250	110.9	Y	Air Guard - Federal Air Monitor Channel

Group 7 Cabinet RD / D7

CH #	Channel Name	RX Freq	RX CG	TX Freq	TX CG	Narrow Band	COMMENTS
1	WEST	171.3875	0.0	171.3875	127.3	Y	West Zone
2	D7 WORK	168.7750	131.8	168.7750	131.8	Y	D7 District Work Channel
3	D7 TAC 1	167.1125	131.8	167.1125	131.8	Y	D7 Tac Channel
4	D7 TAC 2	170.5000	131.8	170.5000	131.8	Y	D7 Tac Channel
5	GOVERNME	171.3875	0.0	165.4625	131.8	Y	West Zone
6	MINTON	171.3875	0.0	165.4625	127.3	Y	West Zone
7	80 PEAK	171.3875	0.0	165.4625	100.0	Y	West Zone
8	ALLENWES	171.3875	0.0	165.4625	151.4	Y	West Zone
9	ALLENLIB	172.2500	0.0	164.1250	151.4	Y	East Zone
10	BERRAY	171.3875	0.0	165.4625	162.2	Y	West Zone
11	A/G 29 W	166.9000	0.0	166.9000	110.9	Y	West Zone A/G
12	COUGAR	171.3875	0.0	165.4625	141.3	Y	West Zone
13	RED	154.0700	0.0	154.0700	156.7	Y	Montana Logger Association
14	MLA	151.5050	0.0	151.5050	94.8	Y	Statewide Mutual Aid
15	LOGGER	151.9250	0.0	151.9250	0.0		Local Logger Channel
16	TAN	155.3400	0.0	155.3400	156.7	Y	Air Ambulance A/G

Group 8 Idaho Panhandle

CH #	Channel Name	RX Freq	RX CG	TX Freq	TX CG	Narrow Band	COMMENTS
1	BLACK MT	172.4000	107.2	165.4875	103.5	Y	Bonnerr Ferry
2	HALL MTN	172.4000	107.2	165.4875	123.0	Y	Bonnerr Ferry
3	SADDLE M	172.4000	107.2	165.4875	131.8	Y	Bonnerr Ferry/Priest Lake
4	HORTON R	172.4000	107.2	165.4875	156.7	Y	Priest Lake
5	SNDPNT B	172.4000	107.2	165.4875	110.9	Y	Sandpoint/Priest Lake
6	LUNCH PK	172.4000	107.2	165.4875	136.5	Y	Sandpoint
7	LTL BLAC	172.4000	107.2	165.4875	100.0	Y	Sandpoint
8	LIGHTNIN	172.4000	107.2	165.4875	167.9	Y	Sandpoint
9	KNF WEST DIRECT	171.3875	0.0	171.3875	127.3		Kootenai West
10	KNF BALDY	171.3875	0.0	165.4625	136.5		Kootenai West
11	A/G PRIM	151.1450	0.0	151.1450	0.0	Y	Primary Air to Ground
12	A/G SECO	168.5375	0.0	168.5375	0.0	Y	Secondary Air to Ground
13	LAKEVIEW	159.4650	100.0	151.2050	100.0	Y	Priest Lake IDL
14	BLACK I	159.3000	114.8	151.3250	123.0	Y	Kootenai Valley IDL
15	SCHWEITZ	159.3375	100.0	151.4375	136.5	Y	PendOreille Lake IDL
16	MICA ID	159.3000	127.3	151.3250	110.9	Y	PendOreille Lake IDL

Group 9 Lolo National Forest

CH #	Channel Name	RX Freq	RX CG	TX Freq	TX CG	Narrow Band	COMMENTS
1	E DIR	172.3750		172.3750	127.3	Y	LNF West Zone
2	MILLER	172.3750		164.1000	131.8	Y	LNF West Zone
3	UNEVERSI	172.3750		164.1000	100.0	Y	LNF West Zone
4	STARK	172.3750		164.1000	103.5	Y	LNF West Zone
5	WHITE MT	172.3750		164.1000	107.2	Y	LNF West Zone
6	QUIGG PK	172.3750		164.1000	156.7	Y	LNF West Zone
7	MINERAL	172.3750		164.1000	136.5	Y	LNF East Zone
8	MORELL	172.3750		164.1000	146.2	Y	LNF East Zone
9	RICHMOND	172.3750		164.1000	167.9	Y	LNF East Zone
10	LAKE MT	172.3750		164.1000	110.9	Y	LNF East Zone
11	PORTABLE	172.3750		164.1000	192.8	Y	LNF PORTABLE RPTR
12	EAST A/G	167.8875		167.8875	0.0	Y	LNF East Zone A/G
13	TAC 1	167.1125		167.1125	0.0	Y	LNF East Zone
14	COMMON 1	163.7125		163.7125	0.0	Y	LNF East Zone
15	TAN	155.3400		155.3400	156.7		Air Ambulance A/G
16	AIRGUARD	168.6250		168.6250	110.9		Air Guard - Federal Air Monitor Channel

Group 10 Flathead

CH #	Channel Name	RX Freq	RX CG	TX Freq	TX CG	Narrow Band	COMMENTS
1	FNF DIR	173.1125		173.1125	123.0	Y	FNF
2	ELBOW	173.1125		164.3750	110.9	Y	FNF
3	KERR	173.1125		164.3750	123.0	Y	FNF
4	ASHLEY	173.1125		164.3750	131.8	Y	FNF
5	WERNER	173.1125		164.3750	136.5	Y	FNF
6	JUMBO	173.1125		164.3750	146.2	Y	FNF
7	FNF NAPA	173.1125		164.3750	156.7	Y	FNF
8	NUMA	173.1125		164.3750	167.9	Y	FNF
9	SCALPLOC	173.1125		164.3750	103.5	Y	FNF
10	PATROL	173.1125		164.3750	100.0	Y	FNF
11	DESERT	173.1125		164.3750	107.2	Y	FNF
12	LOOKOUT	173.1125		164.3750	114.8	Y	FNF
13	BAPTISTE	173.1125		164.3750	141.3	Y	FNF
14	FNF A/G	169.1250		169.1250	123.0	Y	FNF AIR TO GROUND
15	FNF WORK1	168.1625		168.1625	123.0	Y	FNF WORK 1
16	FNF WORK2	163.7125		163.7125	123.0	Y	FNF WORK 2

Group 11 North End Emergency Group

CH #	Channel Name	RX Freq	RX CG	TX Freq	TX CG	Narrow Band	COMMENTS
1	S R 1	155.2950	0.0	155.2950	156.7		
2	S R 2	159.3150	0.0	159.3150	156.7		
3	SHERIFF	155.5950	151.4	155.5950	151.4		
4	PINKSHER	155.5950	151.4	159.1650	107.2		
5	MARSTON	171.2625	0.0	163.3500	114.8	Y	North East Zone
6	WEBB	171.2625	0.0	163.3500	103.5	Y	North East Zone
7	GREY	155.3250	0.0	155.3250	156.7	Y	
8	SILVER	163.8900	0.0	163.8900	0.0	Y	Canada Mutual Aid
9	NE WORK	168.7750	103.5	168.7750	103.5	Y	D1 Work Channel
10	NE TAC 1	171.4750	103.5	171.4750	103.5	Y	D3 Tac Channel
11	EVFD	154.2050	0.0	154.2050	156.7	Y	Eureka Volunteer Fire Department
12	RED	154.0700	0.0	154.0700	156.7	Y	Statewide Mutual Aid
13	A/G 52 E	168.3875	0.0	168.3875	110.9	Y	East Zone A/G
14	N LAW	151.3325	0.0	151.3325	79.7		
15	N LAW RPT	151.3325	0.0	158.7450	79.7		
16	TAN	155.3400	0.0	155.3400	156.7	Y	Air Ambulance A/G

Group 12 D4 Emergency Group

CH #	Channel Name	RX Freq	RX CG	TX Freq	TX CG	Narrow Band	COMMENTS
1	WEST	171.3875	0.0	171.3875	110.9	Y	West Zone
2	D4 TAC1	171.4750	136.5	171.4750	136.5	Y	D4 Tac Channel
3	D4 WORK	163.1250	136.5	163.1250	136.5	Y	D4 District Work Channel
4	BERRAY	171.3875	0.0	165.4625	162.2	Y	West Zone
5	BALDY	171.3875	0.0	165.4625	136.5	Y	West Zone
6	HENRY	171.3875	0.0	165.4625	156.7	Y	West Zone
7	KING	171.3875	0.0	165.4625	110.9	Y	West Zone
8	CO FIRE	154.2050	0.0	154.2050	0.0	Y	Troy Volunteer Fire Department
9	EMS PINK	155.3850	0.0	155.3850	156.7	Y	Troy Volunteer Ambulance
10	EMS WHIT	155.2800	0.0	155.2800	156.7	Y	Troy Volunteer Ambulance
11	LOC GOV	154.0400	156.7	154.0400	156.7	Y	Local Government
12	A/G 29 W	166.9000	0.0	166.9000	110.9	Y	West Zone A/G
13	RED	154.0700	0.0	154.0700	156.7	Y	Statewide Mutual Aid
14	CANADASL	163.8900	0.0	163.8900	0.0	Y	Canada Mutual Aid
15	LOGGER	151.9250	0.0	151.9250	0.0		Local Logger Channel
16	TAN	155.3400	0.0	155.3400	156.7	Y	Air Ambulance A/G

Group 13 D5 Emergency Group

CH #	Channel Name	RX Freq	RX CG	TX Freq	TX CG	Narrow Band	COMMENTS
1	LIBBY	172.2500	0.0	172.2500	123.0	Y	South East Zone
2	BLULIBBY	172.2500	0.0	164.1250	167.9	Y	South East Zone
3	CALX	172.2500	0.0	164.1250	146.2	Y	South East Zone
4	TONY	172.2500	0.0	164.1250	123.0	Y	South East Zone
5	D5 TAC2	167.1125	146.2	167.1125	146.2	Y	D5 Secondary Tac Channel
6	RED	154.0700	0.0	154.0700	156.7	Y	Statewide Mutual Aid
7	CO FIRE	154.2050	0.0	154.2050	0.0	Y	Libby Rural Fire Department
8	EMS WHI	155.2800	0.0	155.2800	156.7	Y	Libby Volunteer Ambulance
9	EMS PIN	155.3850	0.0	155.3850	156.7	Y	Libby Volunteer Ambulance
10	DSTAR 1	155.2650	0.0	155.2650	0.0	Y	David Thompson Search and Rescue
11	LOC GOV	154.0400	156.7	154.0400	156.7	Y	Local Government Direct
12	A/G 52 E	168.3875	0.0	168.3875	110.9	Y	South Zone A/G
13	LOGGER	151.9250	0.0	151.9250	0.0	Y	Local Logger Channel
14	MLA	151.5050	0.0	151.5050	94.8	Y	Montana Logger Association
15	LOGGOVCA	154.0400	156.7	159.1050	100.0		Local Government Calx
16	TAN	155.3400	0.0	155.3400	156.7	Y	Air Ambulance A/G

Group 14 D7 Emergency Group

CH #	Channel Name	RX Freq	RX CG	TX Freq	TX CG	Narrow Band	COMMENTS
1	WEST	171.3875	0.0	171.3875	127.3	Y	West Zone
2	D7 TAC1	167.1125	131.8	167.1125	131.8	Y	D7 Tac Channel
3	TF RFD	154.1300	0.0	154.1300	0.0	Y	Thompson Falls Rural Fire
4	TC RFD	154.1450	0.0	154.1450	0.0	Y	Trout Creek Rural Fire
5	COUGAR	171.3875	0.0	165.4625	141.3	Y	West Zone
6	GOVERNME	171.3875	0.0	165.4625	131.8	Y	West Zone
7	NOXON RF	154.1750	0.0	154.1750	0.0	Y	Noxon Rural Fire
8	HERON R	154.2500	0.0	154.2500	0.0	Y	Heron Rural Fire
9	LOLO W	172.3875	0.0	172.3875	127.3	Y	Lolo National Forest West
10	A/G 29 W	166.9000	0.0	166.9000	110.9	Y	West Zone A/G
11	RED	154.0700	0.0	154.0700	156.7	Y	Statewide Mutual Aid
12	80 PEAK	171.3875	0.0	165.4625	100.0	Y	West Zone
13	SC SHERI	155.7300	0.0	159.0750	173.8	Y	Sanders County Sherriff
14	NOXON E	155.2800	0.0	155.2800	0.0	Y	Noxon Ambulance
15	D7 TAC2	170.5000	210.7	170.5000	210.7	Y	D7 Secondary Tac Channel
16	TAN	155.3400	0.0	155.3400	156.7	Y	Air Ambulance A/G

Group 15 Three Rivers RD / D4(Copy of Grp 4 – Clone Group)

CH #	Channel Name	RX Freq	RX CG	TX Freq	TX CG	Narrow Band	COMMENTS
1	WEST	171.3875	0.0	171.3875	110.9	Y	West Zone
2	D4 WORK	168.7750	136.5	168.7750	136.5	Y	D4 District Work Channel
3	D4 TAC 1	171.4750	136.5	171.4750	136.5	Y	D4 Tac Channel
4	D4 TAC 2	167.1125	136.5	167.1125	136.5	Y	D4 Tac Channel
5	BALDY	171.3875	0.0	165.4625	136.5	Y	West Zone
6	HENRY	171.3875	0.0	165.4625	156.7	Y	West Zone
7	BERRAY	171.3875	0.0	165.4625	162.2	Y	West Zone
8	BLUE LIBB	172.2500	0.0	164.1250	167.9	Y	South East Zone
9	WEBB	171.2625	0.0	163.3500	103.5	Y	North East Zone
10	GOVMNT	171.3875	0.0	165.4625	131.8	Y	West Zone
11	A/G 29 W	166.9000	0.0	166.9000	110.9	Y	West Zone A/G
12	KING	171.3875	0.0	165.4625	110.9	Y	D4 Secondary Tac Channel (Regional)
13	LOC GOV	154.0400	156.7	154.0400	156.7	Y	Local Government Direct
14	RED	154.0700	0.0	154.0700	156.7	Y	Statewide Mutual Aid
15	LOGGER	151.9250	0.0	151.9250	0.0		Local Logger Channel
16	TAN	155.3400	0.0	155.3400	156.7	Y	Air Ambulance A/G

